foundry work. About 30 carloads a year were shipped. A section of the deposit is given in the discussion of glacial deposits.

Alluvial sand and gravel.—Along Lehigh River alluvial deposits occur at many places, and the islands in the river also are composed of alluvial debris. In most places the alluvium consists of mud in which there is a large admixture of anthracite dust, but in a few places deposits contain much sand and gravel. Below Slatington the alluvial gravels have been dug for ballast in several places. A short distance below Cementon considerable alluvial sand was dug and shipped to Catasauqua and Emmaus foundries for molding purposes. The deposit was about 7 feet in depth.

Sand from mud-dam deposits of limonite iron mines.—In the discussion of other a description is given of the character of the deposits in the ponds into which the waste material of the limonite mines was washed. The coarsest sand was deposited near the place where the water entered the pond, and the finer sediment was carried farther out. This sand, which consists of small grains of quartz, quartz crystals, botryoidal chaledony, thin flakes of limonite, and a few fragments of shale, limestone, and quartzite, is mixed with considerable ochereous clay. Even when the mines were in operation this sand was sometimes used for ordinary plaster and mortar, and since the mines were closed, sand for these uses has been dug from the old deposits that are common throughout the region. In some places several feet of sand comparatively free from clay can be obtained, but in most places layers of clay are so closely interstratified with the sand that clean sand is hard to get. If the material were washed a large quantity of good sand could be procured from almost every mud-dam deposit in the county. Notwithstanding the difference in occurrence, the sand from the limonite mines in the limestone and that from the mines in the quartzite are strikingly similar.

In working these deposits it is usually necessary to screen the material to remove any large fragments. The sand was sold for 35 to 45 cents a ton at the pit, or 75 to 85 cents delivered.

An unusual sand product is being produced by Walter Seem about half a mile northeast of Old Zionsville. He quarries and grinds Byram gneiss for chicken grit. By means of a jaw crushe, rolls, and screen, the rock is reduced to sizes suitable for poultry.

Graphite occurs in several places in the metamorphic gneisses of South Mountain in the southern portion of Lehigh County, but has never been worked with profit. Considerable prospect work has been done in three localities, but so far as known no attempt was ever made to mine and market the graphite.

Vera Cruz Station.—The Backenstoe graphite mine is located about one mile east of Vera Cruz Station and one mile west of Limeport, on the north side of the road connecting the two places. The history of the mine is somewhat indefinite, but information obtained from different sources indicates that it was first opened about the middle of the last century as a gold and pyrite mine. The large amount of pyrite